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MANIPULATION OF ACCOUNTING FIGURES AND FINANCIAL PERFORMANCE OF LISTED NIGERIAN FIRMS

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Abstract

This study was based on the manipulation of accounting figures and the financial performance of listed firms in Nigeria between the periods of 2007-2019 (Thirteen years). Ninety (90) firms were drawn as research samples among one hundred and nine (109) listed non-financial firms in Nigeria. The study was done quantitatively and conducted from secondary data obtained from the annual reports of various firms. Descriptive statistics and correlation analysis were used to determine the nature of the relationship between the independent and dependent variables. Given the hypothesis formulated for this research, the method of model estimation employed was a panel regression analysis with the aid of Stata 14 software. The findings revealed that some manipulation techniques such as incorrect asset valuation and timing of assets transaction impact positively on return on assets, thereby justifying the act, albeit unethical. Other techniques such as revenue falsification and understatement of liabilities were seen to negatively impact the return on assets. The study recommends among others, that investors should employ the services of competent financial analysts to scrutinize financial statements of firms they want to invest in.

Keywords: Accounting Figures Manipulation, Financial performance, Earnings Management, Return on Assets.

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1.INTRODUCTION

Financial statements give a snapshot of the financial position of every business entity, including the ultimate goal of a financial statement is to give users of accounting information a true and fair view of the financial conditions and operating efficiency of the firm having assessed and ascertained, in which the financial statement is a working tool for the firm.[1] In recent times as Oraby (2017) asserted, the current accounting practices allow a degree of choice of policies and professional judgment in determining the method of measurement, criteria for recognition, and even the definition of the accounting entity. As a result, some exploit this and opt for a deliberate non-disclosure of accounting information and manipulation of accounting figures, thereby making the business looks more profitable than it is in reality. With this practice, the users of financial statements are many times misled. This is a major threat to the corporate world in terms of investment and growth.

According to a report by the Securities and Exchange Commission (2016), misleading financial statements that usually centres on falsified earnings are being issued at an alarming rate. Such situation can have adverse effects on both the owners and shareholders of the firms. To avoid such impending disaster, shareholders and their representatives on corporate boards should take a proactive stance and watch out for common abuses in the following six areas: (a) revenue measurement and recognition, (b) derivatives, (c) asset valuation, (d) provisions for uncertain future costs, (e) related-party transactions, and (f) information used for benchmarking performance. Bhasin[2] in concurrence with the above assertion further opined that for an organization to get caught up in any financial reporting-related fraud, it is likely to happen in one of the above-listed areas.

Manipulation of accounting figures is the deliberate falsifying of financial records for the users of accounting information to achieve pre-determined target(s) ranging from a firm's desire to achieve more stable earnings, attract as many investors as possible, achieve budgetary targets to a firm's desire to generously reward senior managers. Additionally, some managers are out of desperation, greed, unhealthy competition, as well as bad judgment may also decide to out rightly defraud the firm.[3] The issue of accounting manipulation and its impact on financial performance remains a global issue since the dawn of the global accounting scam which led to the fall of firms like Enron, WorldCom, and Satyam. In a bid to check this menace, board of directors and their audit committees ensure that firms undergo thorough financial statement compliance and strict internal control processes. However, irrespective of the various accounting and corporate governance reforms in addition to new rules, regulations, and standards intended to improve corporate reporting and prevent similar scandals, perpetrations of similar accounting aberrations and manipulations still occur more

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tenaciously. Striking to note is the involvement of lower level of management in such unethical accounting practices.

Financial performance on other hand refers to the degree of accomplishment of financial objectives. That is a measure of how well a firm has used or managed assets at its disposal in day-to-day operations to earn income. According to Wang[4], since the manipulation of accounting figures has the ability to create a very large asymmetry of information for the users of accounting information which also affects their decision-making, it is therefore expected that manipulation of accounting figures will affect the firm performance.[4]

This paper has then become very necessary due to paucity of research on the subject matter in West African countries, especially Nigeria. Secondly, higher levels of standards which emanated from the merging of local standards to International Financial Reporting Standards (IFRS) has called for more research in this area. Thirdly, weak institutions in developing nations encourage manipulations of financial statements and Nigeria may not be exempted. Finally, some research works carried out in Nigeria centres mostly on financial institutions with little or no focus on non-financial firms but this paper has adopted the use of ninety (90) firms (82.6%) out of one hundred and nine (109) listed non-financial firms in the Nigerian Stock Exchange for this study with updated data ranging the periods between 2007 and 2019 (13 years).

In light of foregoing, this paper sought to examine the nexus between the manipulation of accounting figures and financial performance of firms listed in the Nigerian Stock Exchange. The remaining part of this paper is structured as follows; section two presents the literature review and hypotheses of the study, section three introduces the data and research method, section four presents the results and discussion, while section five provides a summary and recommendations.

2.0 Literature Review

In this section, the review of both relevant theoretical and empirical literatures is carried out. However, first, here are some conceptual clarifications.

Clarification of Some Concepts

Manipulation of Accounting Figure (MAF)

The American Institute of Certified Public Accountants (AICPA) defined manipulation of accounting information as: "(a) Manipulation, falsification, and changing accounting information or source documents, (b) Trying to misrepresent or intentionally omit information from financial statements, and (c) Misapplication of accounting principles which may relate to amounts, classification, manner of presentation, or disclosures." Mamo and Aliaz, (2014) explained manipulation of accounting figures as inaccurate presentation, thereby misstating the financial performance and giving a false view of a firm's financial health and strength.

Techniques for Detecting or Measuring Manipulations of Accounting Figures

Through extensive research, scholars over the years have used different variables as proxy for measuring accounting figures manipulation. However, this paper adopted the following variables as a means of measuring manipulation of accounting figures:

Incorrect Asset Valuation: This involves increasing a firm's asset, thereby reporting a more positive financial light than supposed. In other words, it involves creating fictitious receivables, not writing down obsolete inventory on a firm's statement of financial position, thereby manipulating the estimates of an asset's useful life and overstating the residual value of the asset.

Improper Expense Recognition: It can occur when a fraudster records expenses as assets or fails to record them at all. Sometimes, it involves altering parent company's books by leaving off special purpose entities or subsidiaries.

Timing of Assets Transactions: One way through which management manipulates accounting figures is through timing of assets transactions. Although timing of genuine asset transactions is a matter for the discretion of management, the scope to use this can be limited by requiring regular appraisals of accounts so that relevant information is identified in the accounts each year as they occur. Therefore, it is critical to carefully analyze these transactions and identify them when investigating financial statement fraud.

Revenue Falsification: This is the most common form of financial statement fraud. When the person in charge of preparing accounts fabricates revenue, profit, customer data and so on.

Understatement of liabilities: Understatement of liabilities reduces a company's debt on paper, thereby making the company looks financially stronger.

Financial Performance

Palmer (2012) defined term performance as the output results from processes, products and services that permit evaluation and comparison relative to goals, standards, past results and other organizations. Performance can either be financial or non-financial. In measuring the financial performance of a firm, financial ratios play a strong role. Most common financial performance ratios or measures are return on assets (ROA), return on equity (ROE), return on investment and cash flow. However, for this study, we focused on return on assets.

Return on Assets (ROA)

Return on Assets (ROA) is considered as an authentic, useful and practical tool in financial analysis. It is mostly defined as the ratio of net profit to total assets. In other words, it is a productivity ratio that shows in percentage-wise the relationship between the earnings of a firm to its total assets. Even though ROA is not a perfect measure of a firm's performance, it is the most effective measure available to assess a firm's performance. It is mathematically expressed as:

$$ROA = \frac{Net\ Profit}{Total\ Assets}\ x\ \frac{100}{1}$$

A schematic model showing a directional relationship between manipulation of accounting figures and financial performance in terms of the variables representing them is shown in figure 2.1 below.

Theoretical Literature

In reviewing theories that can shed some light on the subject matter, our focus was limited to agency, information asymmetry and ethical theories which are discussed below.

Agency Theory

Jensen and Meckling [5] are the earliest proponents of the agency theory. According to them, the interests of the managers and shareholders are not always perfectly aligned, and when conflict arises between both parties, it represents agency costs. The conflict between managers and shareholders, because of separation of ownership and control, arises as managers seemed to maximize their own utility rather than the value of the firm. In other words, agency theory holds that a firm is a legal fiction that serves as a focus for a complex process in which the objectives of individuals are brought into equilibrium within a framework of a contractual relationship. Differences in interpretation of GAAPs and standards create loopholes for the promotion of self-interest (Jensen & Meckling, 1976). According to Rajput [6], the agency theory provides a solid framework for the understanding of creative accounting behaviour. Thus, this theory is great relevance to this study as it represents a linkage between the management and shareholders' interests, which should always be addressed to achieve the goal of the firm.

Information Asymmetry Theory

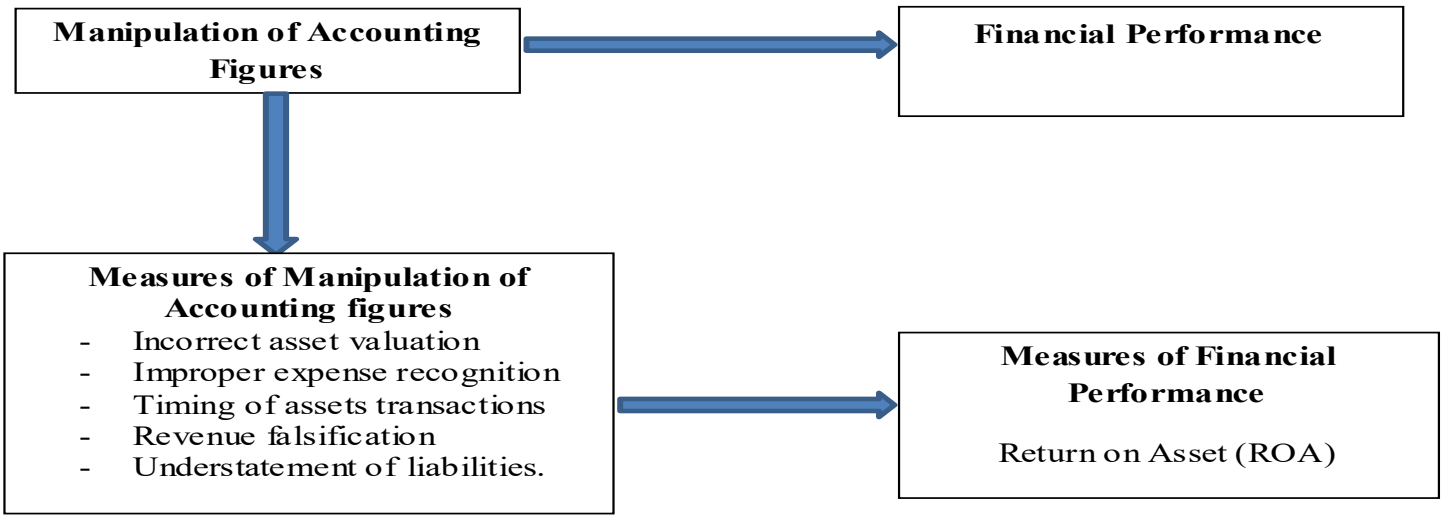
The information asymmetry perspective assumes that financial statement disclosures have information content that possesses value to shareholders and stakeholders in providing useful signals. Russ[7] noted that separation of ownership and control creates an information asymmetry between the managers and shareholders, whereby owners are not "armed" with the information to accurately assess the decisions made by the managers. This, therefore, creates room for unethical managers to take advantage of this information asymmetry and use their positions to further their own agendas rather than those of owners. In other words, the information asymmetry allows the management to disguise the real motives for their actions by hiding or distorting information in such a way as to make their actions appear in the best interest of the shareholders. Therefore, the temptation to artificially drive up stock prices, to invent profits and to hide losses is too great for the management whose jobs depend on the results. More so, in times of major economic difficulties, the management is most often tempted to use and even manipulate accounting figures to improve the performance of the firm in a way that does not accurately reflect the overall picture of the organization.[8]

Ethical theory

This theory emphasizes caution against the "short-termism" of judging an investment based on the yield or profits achieved in the immediate past years and then avoid raising expectations highly in good financial years that the firm was unable to achieve what was subsequently required. The theory maintains that if the trading conditions of a firm are volatile, then investors and shareholders have a right to know this because income smoothing might conceal long-term changes in profit trends. Creative accounting raises the need to be aware of the scope for abuse of accounting policies and manipulation of transactions. Accounting provides a mechanism for monitoring contracts between managers and shareholders, identifies the prospect of accounting policies and reflects the appropriateness in the long-term survival of the firm. Ethics is a great importance in the preparation and presentation of financial statements and reports as it would call for reports that would meet interest of shareholders and investors. Thus, management should always be required to A observe high ethical standards.[9]

Empirical Literature

Here, studies by different scholars on subject matter are reviewed. The specific areas covered here include incorrect asset valuation, improper expense recognition, and timing of assets transactions, revenue falsification, and understatement of liabilities.Olotu, Salawu, Adegbie, and Akinwunmi[10] examined the impact of earnings management on the performance of Nigerian quoted manufacturing companies covering the periods of 2007-2016. Data were analyzed using descriptive and inferential (Correlation and Multiple regression) statistics. The results revealed that of the three performance measures employed in the study, only inventory turnover (IT) was influenced jointly by accrual-based earnings management (AEM) and real activity-based earnings management (REM) moderated by firms' characteristics. Meanwhile, AEM and REM had an insignificant effect on Net Profit Margin and Sales Growth.



Source: Author's Schematic Model, 2021

Figure 2.1: Relationship between Manipulation of Accounting Figures and Financial Performance

Temile, Mohammed and Jatmiko[11] in their study entitled "Earnings Management and Value Relevance in Nigeria: A Pre and Post IFRS Analysis" found that earnings management was indeed present in listed Nigerian firms and had a negative impact on firms' performance. However, using discretionary accruals as a proxy for earnings management, the study found that earnings management practices were reduced after the adoption of IFRS in Nigeria.

Okafor, Ezeagba, and Onyali [12] empirically examined the effect of earnings management on the performance of banking firms in Nigeria from 2010 to 2014. Using the adopted Jones model (1991), they found that earnings management had a negative, but insignificant effect on the performance of banking firms in Nigeria.

Ndungu [13]examined the impact of earnings management on the financial performance of listed non-financial firms in Nairobi County in Kenya. The study focused on seven (7) financial firms in Kenya for one year. The independent variable was earnings management measured by revenue management, expense management, and asset and liability management, while the dependent variable was financial performance measured by sales volume, shareholder's wealth, return on asset, and return on equity. The moderating variable was accounting regulations measured by accounting policy, financial reporting policy, and transparency in reporting. Using primary data, the study found that revenue management enhanced the financial performance of firms' expense management practices and promoted the financial performance of non-financial firms listed with the Nairobi Stock Exchange. Inventory management as well as a reduction in discretionary expenditures influenced the firms' performance. The study also found that assets and liability management by firms did not promote financial performance of firms but overstating assets and understating liabilities, as well as concealment of liabilities negatively affected financial performance of firms

Ramadan[14] investigated impact of creative accounting on institutional investors' involvement. The study was conducted using data from Jordanian manufacturing companies and covering only the Jordanian business environment. From the findings, it was seen that practicing creative accounting, though it is not illegal, it can mislead the investors.

Alhadab and Al-Own[15]examined the nexus between earnings management and bank performance in Europe. The independent variable in their study was loan loss provision, while the dependent variables were return on assets (ROA) and return on equity (ROE). The study also added earrings before tax and loan loss provision, capital adequacy, leverage, dividend, and size. The study used multiple regression technique and the result revealed that the negative impact of earnings management (which takes place in a specific year) feeds through into the following years.

Micah, and Okeoma[16] examined the impact of creative accounting on organizational effectiveness in Nigeria. The independent variable in the study was creative accounting measured by income smoothing, artificial transaction, and regulatory flexibility, while the dependent variable was organizational effectiveness measured by Profitability and Market share selected as the population of study at firm level. A triangulation approach comprising of a self-administered questionnaire survey and financial statements were used to collect both quantitative and qualitative data. Fourteen quoted manufacturing firms from the Nigeria stock exchange were quoted manufacturing companies in Nigeria. The result revealed that there was a positive and significant relationship between creative accounting and organizational effectiveness of firms under the study.

Umobong and Ibanichuka[17] examined the effect of accounting manipulations on the firms' financial performance in Nigeria. The study covered all the manufacturing firms listed in food, beverage and pharmaceutical sub-sectors of the Nigerian economy covering the periods of 2006 to 2014. The study confirmed that managers can use timing of Asset Transaction to smooth earnings, for bonus compensation, for debt covenants and for political costs reasons in line with the various hypothesis stated in the theoretical framework.

Boakye[18] investigated the effect of Earnings Management on the performance of selected listed firms in Ghana. The study only focused on firms which have been listed on the Ghana stock exchange. The study focused on ten (10) companies out of the thirty-five listed companies on the Ghana stock exchange for the periods of 2007 to 2013. The independent variable in the study was earnings management operationalized by discretionary accruals which was derived from the modified Jones model, while the dependent variable was firm performance which was operationalized by return on assets (ROA). Secondary data were collected and processed to generate the figures for earnings management. The results showed that firms in Ghana indulged in earnings management. Also, the results indicated that earnings management had a negative impact on performance.

Tassadaq and Malik[19] examined impact of creative accounting and financial reporting. This study covered the ethical responsibility of creative accounting, factors that influence financial reporting such as auditors, role of government regulations or international standards, impact of manipulative behaviors and impact of ethical values of an individual. Data were collected from about eighty (80) respondents from the industrial sector through structured questionnaire. Multiple regression and correlation analyses were conducted to find out the relationship between the dependent and independent variables. The result revealed among others that that firms' management got involved in frauds or scandals because of several factors such as unethical behaviors, agency problems and non-professional attitude.

In light of the foregoing, the study presents the hypothesis of the study in its null form as follows:

H0: Manipulation of accounting figures does not have any significant relationship or impact on the financial performance of firms in Nigeria.

3.0 Methodology

This section deals with the methodology of the study. This includes model specification, method of analysis, sources of data and so on. This study was quantitative in nature and used secondary data.

Model and Research Variables

The framework for the model of this research was based on the study done by Sianyo (2016). The description of the variables is presented below.

Dependent variable

The dependent variable was financial performances which was proxied by return on asset (ROA). This is mathematically expressed as:

$$ROA = \frac{Profit\ After\ Tax}{Total\ Asset}\ x\ \frac{100}{1}$$

Independent Variables

Incorrect Asset Valuation (IAV)

It represents a cluster of Incorrect Asset Valuation variables. According to Okoye (2016), Altman's Z-score can be used as a fraud detecting model and it has 81% predictive accuracy for (Unequal population) and 86% accuracy for (Equal population). Altman's Z-Score (2010) is a standard model in capturing incorrect asset valuation. The model utilizes operational capital, the totality of assets, market capitalization, and recorded total debt to determine if a firm's assets are properly recognized. The Z-score is shown as;

Z-Score = 1.2. 1 + 1.4X2 + 3.3X3 + 0.6X4 + 1.0X5

Where:

X1 = Working capital/total asset
X2 = Retained earnings/total asset
X3 = Earnings before interest and taxes/ total asset
X4 = Market value of equity/book value of total debt
X5 = sales/total asset

When the calculation is done, the variables are joined to realize the Z-score for the firm. A Z-score > 2.99 falls into correct asset valuation, while we have incorrect asset valuation if reverse is the case.[20]

Improper Expense Recognition (IER)

It represents a cluster of improper expense recognition. Operating expense ratio (OER) was used as a proxy for the variable.

$$OER = \frac{\text{Operating Expenses}}{Total\ Revenue}$$

A decreasing ratio is desirable because it is taken as efficient performance and vice versa.

Timing of Assets Transactions (TAT)

This is expressed as Change in sales Volume (Turnover) for firm i in period t-1. It is mathematically expressed as:

$$TAT = \frac{Sales_t}{Sales_{t-1}}$$

Revenue Falsification (REVF)

This is expressed as $\frac{Receivables_t/Sales_t}{Receivables_{t-1}/Sales_{t-1}}$

Understatement of Liabilities (UND)

This is expressed as $\frac{Current\ liabilities_t/Total\ assets_t}{Current\ liabilities_{t-1}/Total\ assets_{t-1}}$

In light of the above, the model in its functional form is given as:

ROA= f (IAV, IER, TAT, REVF, UND)

From the above functional form, the econometric model is specified thus:

ROA=β0 + β1IAV + β2IER + β3TAT + β4REVF + β5UND+εit

Where:

ROA = Return on Asset
IAV = Incorrect Asset Valuation
IER = Improper Expense Recognition
TAT = Timing of Assets Transactions
REVF = Revenue Falsification
UND = Understatement of Liabilities
β0 = Constant
β1 - β5 = Coefficients of the Independent Variables

Method of Data Analysis

The study employed econometric techniques in estimating the model of the study. This paper used a two-dimensional data set. The exchange rate variable was a time series data but for the period under study, the exchange rate at these periods were replicated all across the cross-sections. After pooling the data in a panel format, preliminary descriptive statistics and correlation coefficients were estimated. This was followed by a panel data regression analysis, and afterwards, the task was to determine if the fixed effect model (FEM) or random effect model (REM) was consistent. According to Pandey[21], the financial characteristics of firms from different sectors or industries vary, so the use of either a fixed-effects or random-effects model is justified.

Data and data source

The study used secondary data which were sourced from the annual reports of the listed firms on the Nigerian Stock Exchange (NSE). The data used from the periods of 2007 to 2019 (13 years), and from 90 firms, giving a total of 1,170 observations. One of the limitations is the unavailability or incomplete data, however, the study was able to include ninety (90) firms (82.6%) out of the one hundred and nine (109) listed non-financial firms in the NSE. This is in line with the opinion stated by Efayena who asserted that, to avoid misrepresentation, financial and non-financial firms should be studied separately. Table 3.1 below shows the justification and the breakdown by industry of the sample firms.

From the above table, it can be seen that the majority of the firms are from the consumer goods, services, and industrial goods industries, while the industries with the least number of firms were the natural resources and construction/real estate industries.

4.0 Presentation and Discussion of Results

Here, the results from the model estimation are presented and discussed starting with the results of descriptive statistics below:

The summary statistics in Table 4.1 above aids in presenting us with the nature and characteristics of the variables under study. From the descriptive statistics, it can be seen that return on assets (ROA) has a mean value of 36.08345 which implies that on the average, all the firms listed had an aggregated positive return on assets value. The variable with the highest mean value is revenue falsification (REVF) with a mean value of 942.1242 which indicates that there was some form of revenue falsification present in the financial statements released by these firms.

Aside the timing of assets transaction variable (TAT), the remaining variables (incorrect asset valuation (IAV), improper expense recognition (IER), understatement of liabilities (UND)) had positive mean values.

The maximum and minimum values of return on assets are 31487 and -3314.441 respectively and this shows that while some firms might have recorded negative returns on assets sometime during the period of study, others have seen positive returns on assets. The maximum and minimum values of incorrect asset valuation are 8.55 and -4.18 respectively which according to Agbaje & Oloruntoba[20] implies that some firms (with a score of over 2.99) correctly value their assets, while the firms under 2.99 value their assets incorrectly.

The results of the standard deviation indicated a very significant dispersion of the variables from their respective mean values except for incorrect asset valuation and understatement of liabilities variables. Having done the preliminary descriptive analysis, the study moved on to the correlation matrix analysis below.

From the above correlation matrix, the only statistically significant relationships are the ones between return on assets and incorrect asset valuation (which is positive and significant at 1% level of significance) as well as incorrect asset valuation and improper expense recognition, which is negative and significant at 1% significance level.

The variables, improper expense recognition, revenue falsification and understatement of liabilities all have negative relationships with return on assets, while incorrect asset valuation and timing of asset transaction have positive relationships with return on assets. Having observed all these, it is vital to note that correlation does not necessarily indicate impact or a causal relationship.

Next, the study proceeded to present and discuss panel regression estimates.

In terms of impact and causal effect, regression analysis here provides a more meaningful understanding of the impact of the independent variables on dividend payout ratio. The estimated model results are presented in the table below.

Table 3 1 Sample Breakdown Based on Industry

S/N	SUBSECTOR	NUMBER OF COMPANIES	PERCENTAGE OF SAMPLE
1	Agriculture	5	5.56%
2	Conglomerate	5	5.56%
3	Construction & Real Estate	4	4.44%
4	Consumer Goods	18	20%
5	Health Service	7	7.78%
6	ICT	6	6.67%
7	Oil & Gas	10	11.11%
8	Industrial Goods	14	15.56%
9	Natural Resources	4	4.44%
10	Services	17	18.88%
	TOTAL	90	100.00%

Source: Author's construct

Table 4.1 Descriptive Statistics

	ROA	IAV	IER	TAT	REVF	UND
Mean	36.08345	.9505263	18.36921	-3.104231	942.1242	.5896715
Maximum	31487	8.550505	12350.57	1192.324	1102722	318.5376
Minimum	-3314.441	-4.183484	-388.3097	-4767.632	-904.9458	-665.4681
Std. Dev.	955.98	1.162151	391.7748	195.4489	32238.4	23.54701
Observations	1170	1170	1170	1170	1170	1170

Source: Author's computation using Stata 14

Table 4.2: Correlation Matrix results

	ROA	IAV	IER	TAT	REVF	UND
ROA	1.0000					
IAV	0.7279***	1.0000				
	[0.0000]					
IER	-0.0020	-0.1597***	1.0000			
	[0.7724]	[0.0000]				
TAT	0.0021	-0.0033	0.0014	1.0000		
	[0.9419]	[0.9115]	[0.9629]			
REVF	-0.0011	0.0018	-0.0007	0.0005	1.0000	
	[0.9699]	[0.9506]	[0.9812]	[0.9873]		
UND	-0.0002	0.0232	0.0029	0.0191	-0.0001	1.0000
	[0.9934]	[0.4274]	[0.9211]	[0.5139]	[0.9968]	
[ ] – p-values	* - 10% significance	** - 5% significance		*** - 1% significance		

Source: Author's computation using Stata14

Table 3: Panel Regression Estimates

Regression summary of dependent variable ROA				
Dependent Variable – Return on Assets				
Variable	**Coefficients**	**Standard Error**	**t Stat**	**P-value**
C	-31.52952	19.04768	-1.66	0.098
IAV	2.942132	.0790289	37.23	0.000
IER	.286495	.0489514	5.85	0.000
TAT	.0232233	.0968788	0.24	0.811
REVF	-.0000706	.0005872	-0.12	0.904
UND	-.7318104	.8043602	-0.91	0.363
R-Squared	0.5435	F-Statistics (5, 1164)		277.20
Adj. R-Squared	0.5416	Prob. > F		0.0000
Observations	1170	Root MSE		647.27

A cursory look at the above panel regression estimates shows that out of all the independent variables, only revenue falsification (REVF) and understatement of liabilities (UND) had negative impacts on return on assets, while incorrect asset valuation (IAV), improper expense recognition (IER) and timing of assets transaction (TAT) had positive impacts on return on assets with IAV and IER being statistically significant at 1% level. The null hypothesis of the study states that manipulation of accounting figures does not have any significant relationship or impact on the financial performance of firms in Nigeria and from the above estimated results, this assertion is disproved thus we reject the null hypothesis.

Bringing into closer focus, incorrect asset valuation having a positive and significant impact on return on assets shows why it was very much present in the financial statements of Nigerian firms. Incorrect assets valuation can be used to diminish reported profits which, in turn, are expected to result to low reported profit, and hence, low taxation for that financial year. However, management can also manipulate asset valuations in such an unrealistic manner as to tweak poor performance into moderate or even high performance in the face of users who may not be sensitive to these techniques. This finding is consistent with Olotu.

Similarly, the results also show that improper expense recognition had a positive and significant impact on return on asset. Improper expense recognition is another earnings management technique used by accountants and management to achieve certain objectives such as downplaying financial performance in order to attract lower taxes. In Okafor et al.[12] an inverse relationship was found between improper expense recognition and financial performance of firms.

Timing of assets transaction had a positive impact on return on assets, but it was not statistically significant. Timing of assets is another manipulation technique usually aimed at investors. Here, a firm's financial statement can be designed to report higher performance by concealing a significant asset purchased during the financial period, given that such assets are yet to be put to use, even though economic value diminishes from the point where the asset is made available for use. Ramadan[14] Umobong, and Ibanichuka also made similar findings in their studies. Conversely, revenue falsification had a negative impact on return on assets albeit statistically insignificant. This is in line with Temile[22], Wang and Ndungu's findings. Lastly, understatement of liabilities also had a negative

but not statistically significant impact on return on assets. Essentially, revenue manipulation is a very key aspect of earnings management because other techniques directly or indirectly affect revenue and reported profits for the various financial years.

The constant term, which was statistically significant at 10% suggested that without the independent variables present, the return on assets would be negative.

The R-squared value of 0.5435 suggests about 54.35% of the variations in return on assets is explained by incorrect asset valuation, improper expense recognition, timing of assets transaction, revenue falsification and understatement of liabilities, while the remaining unexplained 45.65% is captured by the error term. Similarly, looking at the joint significance (F-stat) of the model at 277.20 with a p-value of 0.0000 reveals that the variables jointly have a strong explanatory power on return on assets.

In econometric theory, cross-sectional or panel regressions can either have fixed or random effects and it is best to find out the appropriate output (either fixed or random) that best explains or estimates the specified model. In order to do this, the Hausman test is usually employed, and this will be done subsequently.

Hausman Test

As already pointed out, Hausman test helps to determine the appropriate model to choose between the fixed effect and random effect model. This is important because after deciding which model was appropriate, we took a look at the coefficients of the model and saw if their relationships and impacts on the dependent variable were in consonance with the model we estimated earlier.

The null and alternative hypotheses for the test are stated thus;

H0: Random effect model is appropriate

H1: Fixed effect model is appropriate

The null hypothesis of the Hausman test states that the random effects model was appropriate and also that there was no systematic difference in the coefficients of the fixed and random effects models. From the test result above, it can be seen that the chi-square test statistic of 65.67 has a p-value of 0.0000 so we rejected the null hypothesis and accepted the alternative hypothesis which stated that the fixed effects model is appropriate.

The fixed effects model is summarily presented in the table below.

It can be seen from table 5 that in terms of direction, magnitude and significance of the independent variables on return to assets, the fixed effects model and the panel regression model earlier estimated are strikingly similar. Both incorrect asset valuation and improper expense recognition maintained the positive and significant impact on return on assets, while revenue falsification and understatement of liabilities still impacted the return on assets negatively.

Model Diagnostics

Due to the nature of data used, it is important to perform diagnostics on the regression model. First, we looked at the presence (or absence) of heteroskedasticity before checking for the muticollinearity. In order to test for heteroskedasticity, we make use of the Breusch-Pagan / Cook-Weisberg test for heteroskedasticity which is shown in the table below.

In testing for heteroskedasticity as seen in table 6 above, we wanted to check if the residuals had a constant variance or not. The above test operated on the null hypothesis of constant variance and from the chi-square test result of 0.04 with a p-value of 0.8398, we could not reject the test's null hypothesis because it was greater than both the 5% and 10% levels of significance. We can therefore infer that the model did not have heteroscedasticity problem.

Multicollinearity Test

Multicolinearity tests check the independent variables for a linear or nonlinear pattern. Although this is a problem for time series data, it is usually ignored for panel data regression but because our data was two-dimensional in nature, that is, combining both time series and cross-sectional data, it was not out of place to carry out this test. Table 7 above presents the collinearity diagnostics for the model. From econometric theory, a variance inflation factor (VIF) over the value of 3.5 indicates the presence of multicolinearity, while a mean VIF of 1 suggests that the independent variables were free from multicolinearity. From the above test results, the mean VIF is 1.01 and the VIF of the independent variables are also less than 3.5 which shows that they were within acceptable limit and thus there

Table 4 Hausman Test

Variable	Coefficients (b) Fixed	(B) Random	(b-B) Difference	Sqrt (diag(V_b-V_B)) S.E.
IAV	3.229244	3.069778	.1594665	.0263927
IER	.3090278	.2965538	.0124739	.0105548
TAT	.0285824	.0256151	.0029673	.0083933
REVF	.0285824	-.0002029	-.000154	.0000699
UND	-1.727805	-1.196432	-.5313733	.0693930

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2 (4) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 65.67 Prob. > chi2 = 0.0000

Table 5 Fixed Effects Model

Variable	Coefficients	Standard Error	t Stat	P-value
C	-37.20995	17.98668	-2.07	0.039
IAV	3.229244	3.229244	38.33	0.000
IER	.3090278	.0495233	6.24	0.000
TAT	.0285824	.094429	0.30	0.762
REVF	-.0003569	.0005762	-0.62	0.536
UND	-1.727805	.7837032	-2.20	0.028
R-Squared (within)	0.5774	F-Statistics (4, 95)		293.80
R-Squared (Between)	0.4400	Prob. > F		0.0000
R-Squared (Overall)	0.5430	Observations		1170

Source: Author's computation using Stata 14

Table 6 Breusch-Pagan /Cook-Weisberg test for Heteroskedasticity

Ho: Constant variance	Variables: fitted values of Return on Assets
chi2(1) = 0.04	Prob > chi2 = 0.8398

Source: Author's computation using Stata 14

Table 7 Residual Diagnostics (Multicollinearity Test)

Variable	VIF Collinearity Diagnostics	1/VIF
IAV	1.03	0.973911
IER	1.03	0.974443
UND	1.00	0.999048
TAT	1.00	0.999621
REVF	1.00	0.999996
Mean VIF	1.01	

Summary, Recommendations and Conclusion

This paper has examined the effect of manipulation of accounting figures on the financial performance of listed firms in Nigeria. Focus was on selected manipulation or earnings management techniques such as incorrect assets valuation, improper expense recognition, timing of assets transactions, understatement of liabilities and revenue falsification, while firms' performance was proxied using the return on assets (ROA). The study spanned a period of thirteen years (2007 – 2019) using data from ninety out of one hundred and nine listed firms on the Nigerian stock exchange. The results showed that some manipulation techniques such as incorrect asset valuation and timing of assets transaction actually impact positively on return on assets, thereby justifying the act, albeit unethical. Other techniques such as revenue falsification and understatement of liabilities are seen to negatively impact return on assets.

Recommendations

In light of these findings, the paper proffers the following recommendations:

Having seen that manipulation of accounting figures can truly paint an underperforming firm as a performing one, investors must do due diligence by employing the services of financial experts to critically analyze the financial statements of firms they intend to invest in. This is important for guiding their investment decisions as well as safeguarding their investments. In the same vein, the regulatory authorities in Nigeria should properly scrutinize, and carry out stricter investigations using independent experts to monitor and assess the financial reports of listed firms, as well as properly sanctioning offenders in order to deter existing and new firms from fraudulent financial practices.

Conclusion

Following the results obtained and discussed in earlier sections and in relation to the critical review of past literatures, it is pertinent to state in conclusion of this study that earnings management has a significant effect on the financial performance of listed firms in Nigeria. In other words, until such practices are checked, earnings management techniques will continue to be effectively used to perpetrate fraudulent financial practices.

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